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ABSTRACT

This paper provides a summary of thoughts, resources, ideas, and a review of the state-of-the-art provisions of vocational assessment services for the visually impaired. The paper is organized in seven sections. The first section provides definitions of vocational assessment and the related terms of career assessment, educational/psychological assessment, functional living-skills assessment, and vocational evaluation. Section 2 offers some thoughts about the administration of vocational assessment services and proposes that such services should be a team effort. Entrance criteria for vocational assessment also are discussed. Section 3 defines the purposes and goals of vocational assessment, while the process of vocational assessment is outlined in section 4. Seven approaches to vocational assessment are summarized in section 5. These approaches include the trait approach, the VDARE process, the task approach, the present skills assessment, learning assessment, the teaching approach, and job modification. Section 6 offers guidelines for selecting and administering tests to visually handicapped persons, while the final section summarizes information on psychological tests, work samples, and informal and valuational assessment procedures. Additional sources of information and blank assessment forms also are contained in the report. (KC)

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Vocational Assessment of the Visually Impaired

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VOCATIONAL ASSESSMENT OF THE VISUALLY IMPAIRED

Introduction

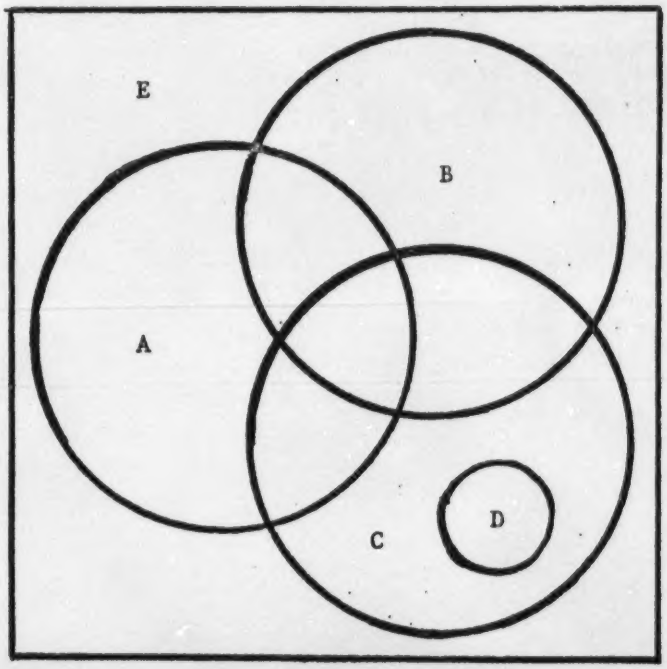
Vocational assessment is a crucial component of educational and rehabilitation services of visually impaired persons. This paper provides a summary of thoughts, resources, ideas, and a review of the state-of-the-art concerning provisions of this service. Particular effort has been made to identify resources and additional sources of information to which practitioners may refer. A manual entitled Vocational Evaluation of the Visually Impaired: A Resource Guide is scheduled to be published in the Fall, 1982, and will provide additional detail concerning information in this paper. The manual will be available from:

Rehabilitation Research and Training Center in
Blindness and Low Vision
Mississippi State University
Post Office Drawer LQ
Mississippi State, Mississippi 39762

What is vocational assessment?

This paper describes "vocational assessment" as part of a total, comprehensive assessment process referred to as "career assessment." This model is graphically illustrated below. Career assessment, a comprehensive assessment of the individual's ability to function in school/work, home and community, is seen as composed of the following components: educational/psychological assessment, functional living skills assessment, and vocational assessment. Vocational evaluation is further considered to be a special type of vocational assessment. Each term is defined below:

A = Educational/ Psychological Assessment
B = Functional Living Skill Assessment
C = Vocational Assessment
D = Vocational Evaluation
E = Career Assessment



Career Assessment

As used here, "career assessment" refers to a comprehensive assessment process that assesses the individual's ability to effectively function in the three major life environments - work, home and community. Work may include ability to function in school, vocational training or on a job. Home and community relate to independent living skills.

Educational/Psychological Assessment

This relates to assessment of general, personal, academic, emotional and cognitive abilities related to the ability of the individual to function in the home, community or at work. This component of assessment services is most well developed in education and rehabilitation agencies.

Functional Living Skills Assessment

Refers to a systematic process to assess skills to function in the home and community. Assessment is most often done informally via training classes in independent living skills. However, more formal assessment methods are being used as well.

Vocational Assessment

Refers to assessment of skills specifically related to vocational training, employment or seeking work. Skills generally include those assessed in educational/psychological assessment as well as: specific vocational skills; work behaviors, attitudes, and motivation; family support system; vocational interests; and vocational aptitudes.

Assessment may be formal, informal or a combination. Dahl (1980) defines vocational assessment as ".....a comprehensive process conducted over a period of time, involving a multi-disciplinary team, with purposes of identifying individual characteristics, education, training, and placement needs, which provides educators the basis for planning an individuals program, and which provides the individual with insight into his or her vocational potential." (p. 103)

Vocational Evaluation

Has been defined by the Vocational Evaluation and Work Adjustment Association as "a comprehensive process that systematically uses work, real or simulated, as the focal point for assessment and vocational exploration, the purpose of which is to assist individuals in vocational development." Nadolsky's description of vocational evaluation is a vocational counseling process in which a client is involved in a sequence of interviews, counseling, psychological tests, occupational exploration, work samples, situational assessment, job tryouts and vocational counseling. As the service of vocational evaluation has developed, it further has had the following characteristics:

- an intensive vocational experience lasting from one to four weeks
- implemented in a separate vocational evaluation center that has often been associated with a sheltered workshop of a comprehensive rehabilitation center
- staffed by a vocational evaluator
- use of commercial work sample systems augmented by some local work samples, psychological tests, and situational assessment to measure aptitudes and specific work abilities

ADMINISTRATION OF VOCATIONAL ASSESSMENT

Funding and Administration: Several agencies have needs of comprehensive vocational assessment. While services for the visually impaired have historically been separate, there are many advantages for cooperative efforts with other agencies. Most obviously, state schools for the visually impaired and rehabilitation facilities may share resources.

Administrative models: The following models are available.

(1) Assessment in the special education classroom in which the special education teacher performs informal and formal assessment in addition to other instructional duties.

(2) Assessment in occupational exploration classes. Many states have initiated classes designed to help students make career decisions. Vocational assessment and exploration could be combined in such a class.

(3) Integrated vocational assessment. Vocational assessment - both formal and informal - may be implemented by a vocational evaluator in existing school resources - special vocational education classrooms, etc.

(4) Vocational evaluation center. A central location where work samples, staff, and assessment materials can be housed and be used. Schools may develop their own centers or cooperatively fund centers with vocational rehabilitation, CETA, and other agencies.

(5) Contracted vocational assessment. Private contractors, rehabilitation centers, etc., may provide vocational evaluation on a contractual basis.

(6) Mobile vocational evaluation units. Mobile vans or trailers may be used and moved from place to place.

Team Effort

Vocational Assessment should be a team effort incorporating input from a wide variety of persons and sources. These will include input by parents and family, teachers of various types, orientation and mobility, communications, independent living skills, vocational, psychologists, counselors, and others. The vocational evaluator has the role of coordinating this input as well as using specific assessment techniques.

Entrance Criteria

Vocational assessment should be based on a clear understanding of the requirements of the environment for which the person is being assessed. When considering entrance into vocational training, systematic information should be gathered concerning entrance requirements for vocational courses via training analysis. When considering assessment for job placement, job analyses should be used to help determine entry level skills for jobs. (See Appendix 1 for description of procedures and resources for and gathering entrance criteria for training programs and jobs). Entry-level criteria must also be specifically gathered for such programs as adult activity centers and sheltered workshops. It must be noted that actual entrance criteria are not always the same as published information available from agencies. Often, additional behavioral requirements are actually used though not spelled out.

PURPOSE AND GOALS FOR VOCATIONAL ASSESSMENT

Vocational assessment should be an integral part of a service system for visually impaired persons. It can be used by: (1) direct service professionals, (2) client/students, and, (3) administrators. Direct service professionals primarily utilize vocational assessment information to help them develop individualized service plans for clients. Recommendations are needed concerning: (a) vocational training; (b) pre-vocational and independent life skills training; (c) job readiness and placement; (d) support services and related agency services; (e) student learning needs, teaching techniques, and curriculum modifications; and, (f) other rehabilitation services.

Clients use vocational assessment to aid them in understanding their own skills and abilities and to make plans and decisions. Improvements in behavior, motivation, and attitude have been reported. Administrators may use vocational assessment for: (1) program needs assessment; (2) monitoring of individual program implementation; and, (3) program evaluation.

PROCESS OF VOCATIONAL ASSESSMENT

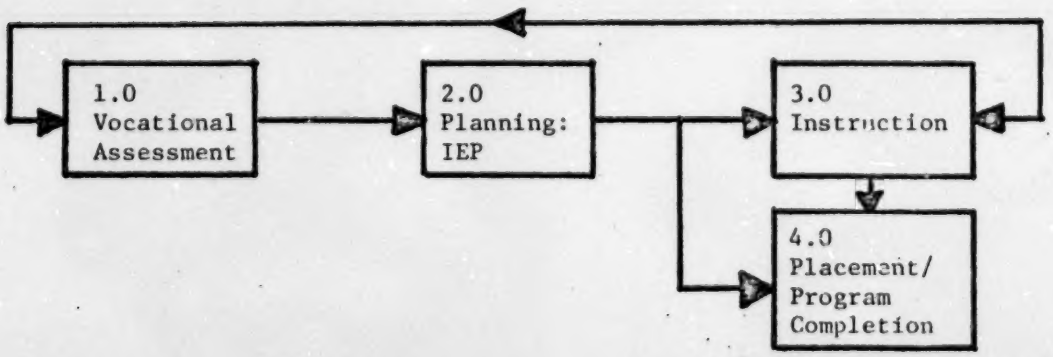
Vocational assessment involves formal and informal procedures but should be implemented systematically so that needed information is gathered. Processes vary somewhat depending upon whether the service provision is relatively short-term, as in a comprehensive rehabilitation center, or more long-term as in state schools and long-term sheltered employment.

Yearly Assessment Process (for longer term programs)

Vocational assessment must be interactive, continuing and instructive; therefore, it involves gathering information continuously. The flowchart in Figure 2 illustrates the yearly interactive relationship between vocational assessment and instruction. Assessment is used as the basis for planning instruction, which in turn provides a means for gathering additional assessment information. This figure attempts to provide a simple guide that personnel may use to monitor their assessment process concerning a visually impaired individual.

Figure 2

YEARLY PROCESS OF ASSESSMENT/INSTRUCTION INTERACTION



Individualized Vocational Assessment

Vocational assessment should be individualized based on the needs of each individual. Specific vocational assessment questions should be identified and methods used that will answer the questions while taking into account specific characteristics of the student. The form in Appendix may be used for this purpose.

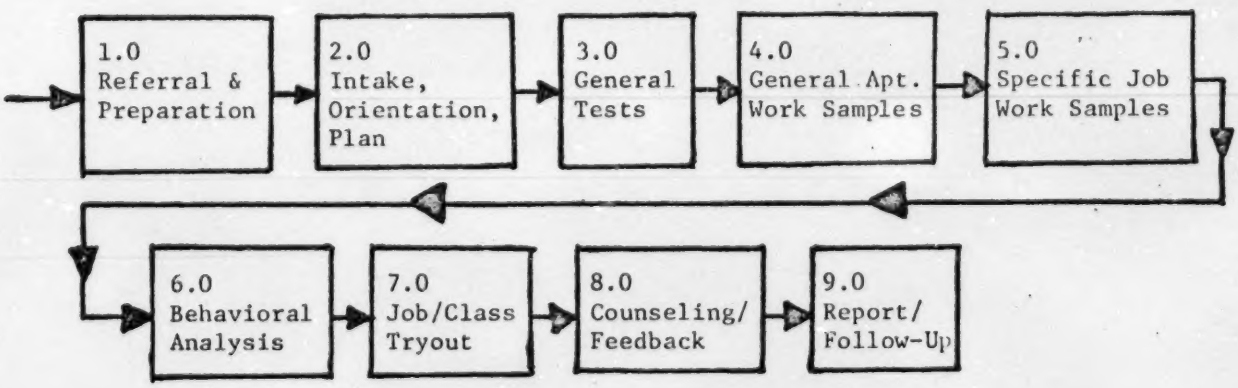
Methods of Vocational Assessment

A variety of methods are available for use in comprehensive vocational assessment that can yield vocationally relevant information concerning students. These methods may include: medical, psychological, educational, and social assessments; interviews; informal teacher assessment; standardized vocational aptitude and interest tests; work samples; behavioral assessment and observational assessments; career exploration; exploratory shop placement, job tryout and/or situational assessment; and vocational counseling.

Methods should be used on an individualized basis to answer specific assessment questions. However, experientially based methods that involve the student in work--real or simulated--are characteristics of vocational evaluation that distinguish it from less intensive forms of vocational assessment. In general, such methods are vital to assure maximum student growth and valid assessment results.

Guidance Process Model

Comprehensive vocational assessment should involve an intensive guidance/assessment process in which students explore occupations while they are being assessed for the skills which the occupations require. A model of a comprehensive vocational assessment program is provided below. In this model, vocational assessment begins with general assessment techniques and proceeds through the use of work samples, situational assessments and job tryouts, and concludes with the determination of the most appropriate vocational placement for the student. While occupational exploration and vocational counseling are shown as discrete elements in the process, they are both actually used throughout the assessment.



1.0 REFERRAL: referral interview; review of referred information; student parent, teacher preparation; referral form
2.0 INTAKE/ORIENTATION: orientation to assessment; intake interview; establish individual assessment plan
3.0 GENERAL TESTING: additional paper and pencil tests if needed
4.0 GENERAL APTITUDE WORK SAMPLES: dexterity/coordination tests; physical skills; occupational exploration via media, group discussion, etc.
5.0 SPECIFIC JOB WORK SAMPLES: assessment on work samples related to specific jobs/career areas or specific training programs; continued occupational exploration
6.0 BEHAVIOR ANALYSIS: behavior observation and analysis in a controlled work setting
7.0 JOB/CLASSROOM TRYOUT/OBSERVATION: based on above results, jobs or training programs will be selected for a brief tryout period for observation of ability to perform there
8.0 COUNSELING/FEEDBACK: talk with person to consider plans, recommendations, and needs. A formal staffing occurs if possible.
9.0 FOLLOW-UP: follow-up of outcome with an individual relative to recommendations. Summary report to teacher and parent. Complete vocational evaluation report to student file and ARD committee

APPROACHES TO VOCATIONAL ASSESSMENT

Several approaches to vocational assessment of visually impaired persons may be taken. A most effective program is one that uses a combination of the approaches identified below.

Trait Approach

Trait and factor theory has been the basis on which psychological and vocational aptitude tests have been developed for the past century. Essentially trait theory states that: (1) individuals possess characteristics which are often called aptitudes, personality traits, interests, temperaments, physical abilities, etc. which are relatively stable across time and across situations or environments; (2) different occupations require different degrees and types of traits which can be determined through job analysis; (3) the traits of individuals can be measured and compared with the trait requirements of jobs thus providing vocational training and placement recommendations.

The Department of Labor (DOL) has conducted extensive investigations of occupations since the 1930's to identify both tasks performed in jobs and the traits required to effectively perform these tasks. The traits identified by DOL include: (1) worker functions; (2) general educational development; (3) aptitudes; (4) work conditions; (5) physical demands; (6) interests; and, (7) temperaments. Each of these traits can be rated numerically according to degrees of a trait required. For instance, one of the physical demands relates to the amount of weight that can be lifted by an individual. This ranges from sedentary work (lifting 10 pounds maximum) to very heavy work (lifting more than 100 pounds). The aptitudes defined by the Department of Labor include: G - general intelligence; V - verbal; N - numerical; S - spatial perception; P - form perception; Q - clerical perception; K - motor coordination;

M - manual dexterity; F - finger dexterity; C - color vision; E - eye-hand-foot coordination. These aptitudes are rated on a five to one scale with "1" representing the lowest ability level. Figure 1 shows a printout in which coded worker traits are shown for several jobs.

VDARE Process

Specific aptitude tests, such as the General Aptitude Test Battery (GATB), have been related to the traits as defined by DOL. However, a systematic process for relating all information to DOL worker trait information has been developed. Further detail is available from:

VDARE Service Bureau
Post Office Box 1945
Athens, Georgia 30603
(404) 548-8161

This process is summarized below.

To use the VDARE Process" several materials are needed. These include: (1) Dictionary of Occupational Titles (DOT); (2) Classification of Jobs; (3) VDARE Worksheet (See Figure 2); and, (4) Handbook for Analyzing Jobs.

Essentially, the process involves the following steps.

1. Identify a worker trait profile for the individual being assessed.
2. Use this profile of the individual's traits to compare with the trait requirements of jobs as published in the Classification of Jobs and illustrated in Figure .
3. Based on this comparison make recommendations for job training, placement or other services.

The process of developing the worker trait profile for the individual involves several steps depending upon the individual's background, utilization of test results, etc. Past job history and test results are converted into numberial worker trait ratings. If a change in certain worker traits has occurred, due to an industrial accident, for example, an estimate is made concerning the present functioning of the individual. This procedure is described below in more detail.

1. Identify past jobs held by the individual and the worker traits required on those jobs.
   This is done via a complete work history, identification of DOT numbers for past jobs, and determination of worker traits via the Classification of Jobs manual (See Figure 1).
2. Use tests, work samples, situational assessment and other vocational evaluation tools to provide further determination of aptitudes and worker traits.
3. A profile on the individual's worker traits is developed. At this point the VDARE worksheet will be full of numbers representing worker traits demonstrated by the individual on past jobs, tests, work samples, situational assessment, etc. The evaluator should then look at trait ratings in each column and identify the rating for the highest skill level. This number should be listed at the bottom.
4. Compare the worker traits of the individual with the required worker traits for various jobs as published in the manual: Classification of Jobs.

FIGURE 1

DOT	DPT	GOE	JOB TITLE	PHYS DEMANDS	WORK COND	GED R	GED M	GED L	SVP	APT 1	2	3	4	5	6	7	8	9	10	11	INTERESTS	TEMP
780381010	3S 8N 1S	050515	AUTOMOBILE UPHOLSTERER	M346	I	3	2	3	6	3	3	3	3	3	4	3	3	3	4	4	1A4B5B	MTV
780381014	3S 8N 1S	050515	AUTOMOBILE-UPHOLSTERER A	M346	I	3	2	3	6	3	3	3	3	3	4	3	3	3	4	4	1A4B5B	MTV
780381018	3S 8N 1S	050515	FURNITURE UPHOLSTERER	M346	I	4	3	3	7	3	3	3	2	2	4	3	3	2	5	3	1A4B5B	MT
780381022	3S 8N 1S	050515	FURNITURE-UPHOLSTERER AP	M346	I	4	3	3	7	3	3	3	2	2	4	3	3	2	5	3	1A4B5B	MT
780381026	3S 8N 1S	060227	HEARSE UPHOLSTERER	M34	I	3	2	3	5	3	4	3	3	3	4	3	3	3	5	5	1A4B	JV
780381030	3N 8N 1S	060232	PAD HAND	L46	I	3	2	3	5	3	4	4	4	3	5	3	3	3	5	4	1A3A4B	RT
780381034	3S 8N 1S	050515	SLIPCOVER CUTTER	L346	I	3	2	3	6	3	3	3	3	3	4	3	2	3	5	3	1A4B5B	MT
780384010	3N 8N 4S	050515	AUTOMOBILE-SEAT-COVER-AN	M346	I	3	3	3	4	3	4	4	4	3	4	3	3	3	4	4	1A3A4B	MT
780587010	5S 8N 7S	060302	SORTER, UPHOLSTERY PARTS	M46	I	2	1	1	3	4	4	4	4	3	4	4	4	3	5	4	1A3A	RT
780681010	6N 8N 1S	060227	UPHOLSTERER, INSIDE	M346	I5	4	3	3	7	3	4	4	3	3	4	3	3	3	5	4	1A4B5B	MT
780682010	6N 8N 2S	060205	SEWING-MACHINE OPERATOR	L46	I5	3	1	1	4	4	4	4	4	3	5	3	3	3	4	4	1A4B	RT
780682014	6N 8N 2S	060205	SLIP-COVER SEWER	L46	I	3	1	1	4	3	4	4	3	3	4	3	3	4	4	5	1A4B	RT
780682018	6N 8N 2S	060205	UPHOLSTERY SEWER	L46	I	3	2	2	4	3	4	4	4	3	4	3	3	3	4	4	1A3A4B	RT
780684010	6N 8N 4S	060427	BACK PADDER	L4	I	2	1	1	2	4	4	4	4	4	5	3	4	3	4	5	1A3A4B	RT
780684014	6N 8N 4S	060422	BAND-TOP MAKER	L34	I5	2	1	1	3	3	4	4	4	4	5	4	3	3	5	5	1A3A4B	RT
780684018	6N 8N 4S	060434	BOX-SPRING MAKER 1	M46	I	2	1	1	3	4	4	4	4	3	4	3	3	3	5	5	1A3A4B	T
780684022	6N 8N 4S	060422	BOX-SPRING MAKER 2	M4	I	2	1	1	3	4	4	5	4	3	5	3	3	3	5	5	1A3A4B	T
780684026	6N 8N 4S	060427	CASKET COVERER	M4	I	2	1	1	3	3	4	4	3	3	4	3	3	3	5	4	1A4B	RT
780684030	6N 8N 4S	060222	CASKET LINER	M46	I5	3	1	1	4	3	4	4	3	3	4	3	3	3	5	4	1A3A4B	RT
780684034	6N 8N 4S	060227	CHAIR UPHOLSTERER	M346	I	3	2	2	5	3	4	4	3	3	5	4	3	3	5	4	4B5B	RT
780684038	6N 8N 4S	060427	COTTON DISPATCHER	M46	I	2	1	1	2	4	4	4	4	4	5	3	4	3	5	5	1A3A	RT
780684042	6N 8N 4S	060427	CRUSHER	M346	I	2	1	1	2	4	4	4	4	3	4	3	3	3	5	5	3A4B	RT
780684046	6N 8N 4S	060422	CUSHION BUILDER	L4	I	2	1	1	3	3	4	4	4	4	5	3	3	3	5	5	1A3A4B	RT
780684050	6N 8N 4S	060422	CUSHION BUILDER	M4	I	2	1	2	2	4	4	4	4	3	4	3	3	3	5	4	1A3A	R
780684054	6N 8N 4S	060423	CUSHION MAKER 1	M46	I	2	1	1	4	4	4	4	3	3	4	4	3	3	4	4	1A3A4B	RT
780684058	6N 8N 4S	060422	EDGE ROLLER	L4	I	2	1	1	3	3	4	4	4	4	5	4	3	3	5	5	1A3A4B	R
780684062	6N 8N 4S	060429	FABRICATOR, FOAM RUBBER	L46	I	2	1	1	2	4	4	4	4	3	4	3	4	3	5	5	1A3A4B	RT
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780684070	6N 8N 4S	060227	MATTRESS FINISHER	M46	I	3	2	2	3	4	4	4	4	3	4	3	3	3	5	5	1A3A	RT
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780684078	6N 8N 4S	060422	PADDER, CUSHION	L4	I	2	1	1	3	3	4	4	4	3	5	4	3	3	4	4	1A3A4B	RT
780684082	6N 8N 4S	060422	PANEL COVERER, METAL FUR	L4	I	2	1	1	2	4	4	4	4	3	4	4	4	3	5	4	1A3A4B	RT
780684086	6N 8N 4S	060427	PANEL MAKER	L4	I	2	1	1	3	4	4	4	4	3	5	4	3	3	5	5	1A3A4B	RT
780684090	6N 8N 4S	060427	POCKETED-SPRING ASSEMBLE	L4	I	2	1	1	3	4	4	4	4	3	4	3	3	3	5	5	1 3 4	RT
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780684098	6N 8N 4S	060422	SPRING ASSEMBLER	M4	I	2	1	1	2	4	4	4	4	4	5	3	3	3	5	5	1A3A4B	R
780684102	6N 8N 4S	060424	SPRING CLIPPER	L4	I	2	1	2	3	4	4	4	4	4	4	4	4	3	5	5	1A3A	RT
780684106	6N 8N 4S	060232	SPRINGER	M346	I	3	1	2	4	3	4	4	3	3	4	4	3	3	5	5	1A3A4B	RT
780684110	6N 8N 4S	060224	TESTER, CONVERTIBLE SOFA	M4	I	3	1	2	4	3	4	5	3	4	5	3	3	3	5	5	1A3A4B	MT
780684114	6S 8N 4S	060223	TRIMMING ASSEMBLER	L46	I	3	2	2	3	3	4	4	3	3	5	4	4	4	5	3	1A3A4B	MT
780684118	6N 8N 4S	060427	UPHOLSTERER, OUTSIDE	V346	I	2	1	2	4	3	4	4	3	3	4	3	3	3	5	4	1 3 4 5	RT
780684122	6N 8N 4S	050515	UPHOLSTERY REPAIRER	M346	I	3	1	1	6	3	4	4	3	3	4	3	3	3	5	4	1A3A4B	RT
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780687010	6N 8N 7S	060427	BORDER MEASURER AND CUTT	L4	I	1	1	1	1	4	4	4	4	4	5	4	4	3	5	5	1A3A4B	R
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780687026	6N 8N 7S	060427	MATTRESS STRIPPER	M34	I	1	1	1	4	4	4	5	5	4	5	4	4	3	5	5	1A3A	R
780687030	6N 8N 7S	060422	MATTRESS-SPRING ENCASER	L4	I	2	1	1	2	4	4	4	4	4	4	3	3	3	5	5	1A3A4B	R
780687034	6N 8N 7S	060427	PADDING GLUER	M34	I5	2	1	1	2	4	4	5	4	4	5	3	4	3	5	5	1A3A	R
780687038	6N 8N 7S	060427	SPRING COVERER	M46	I5	2	1	1	2	4	4	4	4	4	5	4	4	3	5	5	1A3A	RT
7[illegible]87042	6N 8N 7S	060422	STAPLER, HAND	M4	I	2	1	1	2	4	4	5	4	4	5	3	4	3	5	5	1A3A	R
7[illegible]87046	6N 8N 7S	060423	STUFFER	L[illegible]	I	1	1	1	1	4	4	5	4	5	5	4	4	4	5	5	1A3A	R
7[illegible]	6N 8N 7S	060427	TUFTER, HAND	M4	I	2	1	1	2	4	4	5	4	4	5	4	3	3	5	5	1A3A	R
7[illegible]	6N 8N 7S	060427	UPHOLSTERER HELPER	M4	I	2	1	1	3	4	4	4	3	3	5	3	3	3	5	4	1A3A	R
7[illegible]	[illegible]	060439	UPHOLSTERY CLEANER	M346	I7	2	1	1	2	4	4	5	4	4	5	4	4	3	5	4	1A3A	R
781[illegible]	[illegible]	050302	SUPERVISOR, PATTERN MARK	L456	I	4	3	3	7	3	3	3	3	3	3	3	3	4	5	5	5 4	DMV
781[illegible]	[illegible]	060201	SUPERVISOR, CUTTING DEPA	L456	I	4	3	3	6	3	3	3	3	3	3	3	3	3	5	4	5A4B	DMPT
781[illegible]	[illegible]	060231	CLOTHING-PATTERN PREPARE	S46	I	4	4	3	6	3	4	3	2	3	3	4	4	4	5	5	1A4B	MT
781[illegible]	[illegible]	010203	CARTOON DESIGNER	S46	I	3	3	3	6	3	3	3	2	2	3	3	4	4	5	3	1A3B5B	JT
781[illegible]	[illegible]	050515	DESIGNER AND TEMPLATE MA	L2346	I	4	4	4	6	3	3	3	2	4	4	3	3	3	5	5	1A3A4B	MT
781[illegible]	[illegible]	010502	LEATHER STAMPER	L46	I	3	1	1	5	3	4	4	3	2	5	3	2	3	5	3	1A4B5B	RT
781[illegible]	[illegible]	050302	PATTERN GRADER-CUTTER	L46	I	3	3	3	6	3	4	3	3	2	4	3	3	3	5	5	1A4B	MT
781[illegible]	[illegible]	[illegible]	PATTERNMAKER	L346	I	4	4	4	7	2	3	3	2	2	3	3	2	3	5	4	1A4B	MT
781[illegible]	[illegible]	[illegible]	SAIL-LAY-OUT WORKER	M3456	I	4	3	2	8	3	3	3	2	3	4	3	3	3	5	4	1A4B5B	MT
781[illegible]	[illegible]	[illegible]	CUTTER, FABRICS AND MATE	M46	I	3	2	2	6	3	4	3	4	3	4	3	4	3	5	4	1A3A4B5B	MT
781[illegible]	[illegible]	[illegible]	MARKER 1	L46	I	3	2	2	4	3	4	3	3	3	4	3	3	3	5	4	1A3A4B	RT
781[illegible]	[illegible]	[illegible]	SAIL CUTTER	L346	I	3	2	2	4	4	4	4	3	3	4	4	4	3	5	4	1A3A4B	RT
781[illegible]	[illegible]	[illegible]	PLEAT PATTERNMAKER	L46	I	3	3	2	5	3	4	3	3	3	4	4	3	3	5	5	1A4B	RT
781[illegible]	[illegible]	[illegible]	CUTTER APPRENTICE, HAND	L46	I	3	1	2	5	4	4	4	3	3	4	3	3	3	5	4	1A3A4B	RT
781[illegible]	[illegible]	[illegible]	CUTTER, HAND 1	L46	I	3	1	2	5	4	4	4	3	3	4	3	3	3	5	4	1A3A4B	R[illegible]
781[illegible]	[illegible]	[illegible]	[illegible]	M46	I	2	1	2	2	4	4	4	4	4	4	4	[illegible]	4	5	4	1A3A	R
781[illegible]	[illegible]	[illegible]	[illegible], MACHINE	S46	I5	2	1	1	2	4	4	4	4	3	5	3	4	3	4	5	1 3 4	RT
781[illegible]010	[illegible]	[illegible]	[illegible] CUTTER 1	M346	I	2	2	2	4	3	4	4	4	3	4	4	4	3	5	5	1A3A4B	MT

-8-

FIGURE 2

2

Name JOHN DOE

Use 1965 _____ 1977 _____ or Local _____

GUE
Code # INDUSTRY D.O.T TITLE

Physical Demands: Strength (SLMHV), Climb/Balance, Stoop/Bend, Reach/Handle, Talk/Hear, Vision

Working Conditions: I/O/B, Cold, Heat, Wet/Humid, Noise/Vibs, Hazards, Fumes/Dust/Odor

GED: Reasoning (1...6), Math (1...6), Language (1...6), Durat...

SVP: ...ation (1...9)

Aptitudes (Lowest 5 4 3 2 1 Highest): INT, V, T, C, or G; Intelligence; Verbal; Numerical; Spatial Perception; Form Perception; Clerical Perception; Motor Coordination; Finger Dexterity; Manual Dexterity; Eye/Hand/Foot Coord; Color Discrimination

Interests (1965) Work Activities 1977 (1) (6) (2) (7) (3) (8) (4) (9) (5) (0): Things; People-Ideas; Business with People; Science/Technology; Routine/Organizing; Abstract/Creative; Social/Helping; Non Social/Mechanics; Prestige/Esteem; Tangible Productivity

Temperaments (1965) Work Situations 1977 (1) (2) (3) (4) (5) (6) (7) (8) (9) (0) (X) (Y): Varied Duty/Change; Short Cycle/Repetition; Close Instructions; Control over Task; Dealing with People; Working Alone; Influencing Others; Stress/Risk Taking; Subj. Eval. of Info; Obj. Eval. of Info; Interpret Feelings; Meet Precise Standards; Certification Licensure

History	1	2	3	4	5	6	1	2	3	4	5	6	7	R	M	L	D	T	G	V	N	S	P	Q	K	F	M	E	C	1a	1b	2a	2b	3a	3b	4a	4b	5a	5b	V	R		C	P		I	S	J	M	F	T	CL
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...raits to be clarified)																																																					
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...onally Relevant Information, (Medical, Social, Psychological, Educational & Vocational)

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Task Approach to Vocational Assessment

Several problems exist in trait oriented assessment with visually impaired persons. These include: (1) traits are not appropriately defined for visually impaired persons; (2) the abstract nature of trait assessment often reduces motivation and understanding; (3) trait assessment is less specific - one can possess adequate traits and not be able to do specific job tasks.

Due to these shortcomings vocational evaluation has developed techniques that "utilize work, real or simulated, as the focal point of assessment" (VEWAA, 1978). These include work samples that utilize the tasks, tools, and materials of actual jobs or clusters of jobs. Additionally, situational assessment, the systematic observations or work skills and behaviors in actual work settings, has been increasingly used. In other words, the performance of actual job tasks has been used, not only to assess more general work tratis, but to determine an individuals ability to perform the tasks and utilize the skills associated with a particular job or group of jobs.

Work samples, job tryouts, and other methods use this task oriented approach to assessment while at the same time providing assessment of traits via the VDARE process.

Present Skills Assessment

This approach to vocational assessment uses trait or task assessment to assess present skills of an individual. Present skills assessment is most often used to recommend broad services. However, it is most useful when used to recommend very specific training as outlined in the Program Related Assessment model developed by Irvin and Halpern. In this model nine steps are followed.

1. Select content areas of concern
2. Select instruments to be used
3. Measure current performance
4. Determine need for service
5. Determine service priorities
6. Develop goals and objectives
7. Implement and monitor programs
8. Evaluate program outcomes
9. Close services, or develop new plan

Learning Assessment

In recent years Marc Gold and Thomas Bellamy have developed approaches in which intensive training has been provided to severely and profoundly retarded individuals in vocationally related tasks. What they have discovered is that these individuals, given appropriate teaching techniques with sufficient "power," are able to perform tasks with a great deal more complexity than anyone thought possible. In one of Gold's earlier studies, he reported training deaf-blind mentally retarded individuals to do a multi-step assembly of a bicycle brake. Other researchers and program developers have developed similar programs to train mentally retarded individuals for placement in competitive employment. The fact that most of the individuals in these studies were assessed as having little vocational potential via assessment that focussed on present skill levels via both task and trait approaches, has important implications for vocational assessment of these individuals.

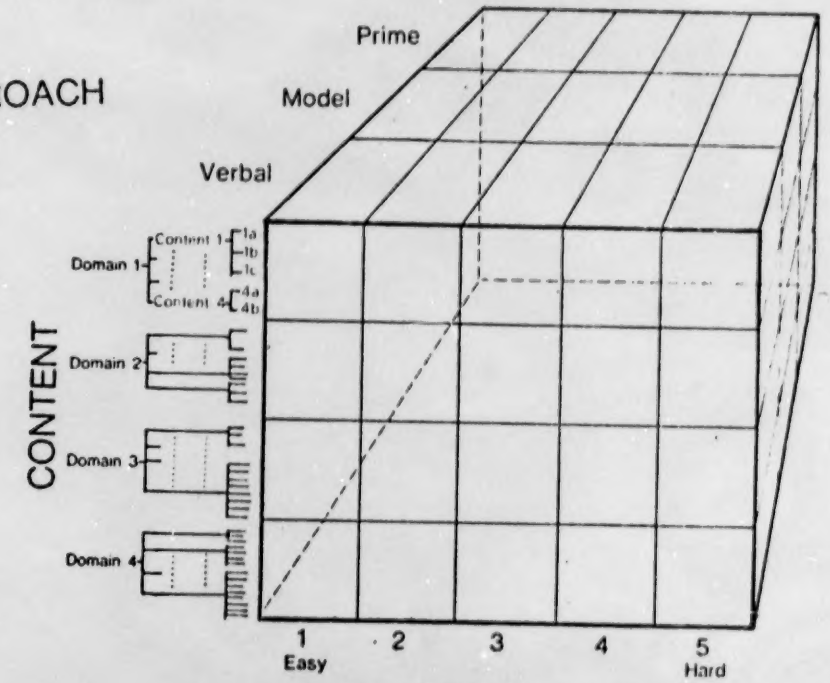
Efforts have been made, however, to conceptualize an approach to vocational assessment that will focus on questions such as: Can the individual learn? At what levels of difficulty? With what types of teaching or counseling techniques? And, at what rate? If we can answer these questions we can use present skill assessment to determine what an individual now knows and what skills need to be developed. Further we can identify how to teach them, what types of things they will likely be able to learn, and what staff and teaching resources will be necessary to help the individual learn.

At present two primary resources appear available that deal with learning assessment in vocational assessment in a somewhat systematic manner. These are:

1. Learning Assessment in Vocational Evaluation
   Paul McCray
   Materials Development Center (MDC)
   University of Wisconsin-Stout
   Menomonie, Wisconsin 54751
   Cost: $2.00

2. Trainee Performance Sample
   Larry Irvin and Andrew Halpern
   Research and Training Center in
   Mental Retardation
   University of Oregon

In McCray's publication clinical procedures are described for using work samples to determine the learning style and ability of evaluees. He suggests that during a learning/practice period an evaluee be given instruction and allowed to practice critical parts of the work sample to a certain criterion level (for example, three correct consecutive assemblies). The evaluator provides instruction to the degree needed to teach or instruct the client to reach criterion. Instructional techniques are based on research by Marc Gold in which a hierarchy of techniques is used proceeding from the least to the most "powerful." The hierarchy is: verbal directions, demonstration, and physical guidance.



Model for test development.

The Trainee Performance Sample was developed for use with mentally retarded clients that identifies in very specific ways the interaction between type skill (content), teaching approach, and difficulty level of a task. This test systematically assesses learning responses of individuals with severe learning difficulties and can be used to reliably: (1) recommend teaching/training techniques; (2) identify staff resources; and (3) indicate difficulty level of tasks that can be learned with a given amount of resources.

While designed specifically for the mentally retarded this assessment approach has important implications for assessment of visually impaired persons - particularly the multi-handicapped.

Job Modification

This approach involves using work samples and other task related assessment procedures to determine what an individual may do with appropriate job modifications. Some work samples have made modifications for use with the visually impaired (See Dicksen, 1976). Ideally, in an occupationally oriented work sample, several procedures for job modification would be tried to help determine ways in which the individual could be most productive. An on-going consultative and in-service arrangement with a rehabilitation engineer would be important in this process. Mallik (1978) at George Washington University has implemented a project in which this process has been effectively developed.

PROCEDURES FOR SELECTING, AND ADMINISTERING TESTS WITH VISUALLY HANDICAPPED PERSONS

Selection of tests. Tests should be selected based on an analysis of local jobs and training programs available for visually impaired persons and based on the characteristics of the individuals normally served. See the following publication for a description of a systematic procedure: Psychological Testing in Vocational Evaluation, MDC, University of Wisconsin-Stout, 1980. The following considerations are important for visually impaired persons: (1) degree and type of visual impairment; (2) test-taking ability; (3) when visual impairment occurred; (4) cultural and life experiences of the individual; and (5) tendency of the blind to be overly verbal.

Orientation and preparation for assessment.
The blind individual must be given a verbal description and physical orientation to the vocational assessment environment. He/she should be told the reasons for assessment, types of activities that will occur, etc. Additionally, the individual must be given an orientation to each individual test, which should include: (1) physical and tactile orientation to test materials; (2) an explanation of test content and purpose; and (3) other comments to relieve anxiety. Bauman (1974) indicates that "the blind client should be told all pertinent information that a seeing person would naturally obtain by sight." The evaluee should be encouraged to explore all materials; the examiner may guide the hands of the individual in exploring items as they are explained. Sufficient time should be allowed for this orientation process. Physical orientation procedures are especially important in performance tests and work samples. For work samples, orientation should also include a description of how the work sample relates to the world of work and modifications made in the job for blind persons.

Presentation of Instructions and Test Items

For the partially sighted: (1) large print tests, or, (2) low vision aids may be used. Regular tests may be modified by retyping with an "Orator" typing element or with use of special enlarging Xerox machines. The American Printing House for the Blind, Post Office Box 6055, Louisville, Kentucky, 40206, has available several academic achievement tests in large print. For the totally blind tests may be: (1) braille, or, (2) given in oral form by an examiner or using a tape recorder. Administration techniques should be as similar to normal conditions as possible, and in the case of work samples, most like those used on the job as well.

Recording of Responses to Test Items

The partially sighted may: (1) use regular answer sheets with or without the use of low vision aids, or, (2) large print tests may be used and answers circled on the test itself. Totally blind persons may: (1) use braille answer sheets available from the American Printing House for the Blind, or (2) indicate responses orally to an examiner or tape recorder, or (3) use of a typewriter or braille stylus, and (4) for multiple choice or true-false using numbered tickets and placing them into piles. In the case of performance tests, of course, responses are the actual performance of the tasks.

Procedures to Help Assure Valid Assessment

Several procedures may be used to help insure that an assessment procedure is actually measuring the skill in question. A client may be taught to do a particular task (See "Learning Assessment") prior to a scored performance on that task. Some use a set amount of instruction and practice while others train to a certain performance criterion. Similarly, extra practice trials may be allowed on tests that have standardized practice periods. A client may be allowed to repeat instructions to insure that he/she understands. Additionally, the actual content of a test may be modified to be more in keeping with actual experiences of the values; and more time may be allowed to compensate for disadvantages caused by the visual impairment. It must be understood, however, that many of these procedures alter the conditions under which a test has been standardized.

ASSESSMENT INSTRUMENTS USED IN VOCATIONAL ASSESSMENT OF THE VISUALLY IMPAIRED

A comprehensive program of vocational assessment will use many sources of information to include: (1) medical information; (2) records; (3) interviews and counseling; (4) informal assessment by communications, orientation and mobility, and vocational education teachers; (5) psychological tests; (6) work samples; and (7) situational assessment. Below summary information is given concerning: (1) psychological tests; (2) work samples; and (3) informal and situational assessment procedures.

Psychological Tests

The most complete current information is available in the following three publications concerning use of psychological tests with visually impaired persons:

1. Charles Vander Kolk, Assessment and Planning with the Visually Impaired, University Park Press, 1981.

2. Geraldine Scholl and Ronald Schnur, Measures of Psychological, Vocational, and Educational Functioning in the Blind and Visually Impaired, American Foundation for the Blind, New York, 1976.
3. Karl Botterbusch, The Use of Psychological Tests with Individuals Who Are Severely Disabled, Materials Development Center, SVRI, University of Wisconsin-Stout, Menomonie, Wisconsin, 54751, 1976.

Intelligence Tests: The most used measure of intelligence are the Wechsler scales with special focus on the verbal scales which may be used without modification. Other tests that have been used with varied results include: (1) Haptic Intelligence Scale for the Blind; (2) Stanford-Kohs Block Design Test for the Blind; and (3) Ravan Progressive Matrices - Adapted for Blind.

Learning Aptitude: Two assessment instruments have been used to determine learning processes of blind persons. Bauman developed the Non-language Learning Test, a clinical instrument in which information is gathered concerning an individuals ability to solve problems. Bauman claims the test can evaluate ability to profit from instructions and experience, orientation in work space, ability to get information by touch, etc. The Blind Learning Aptitude Test designed by Newland is designed to demonstrate adaptiveness in a variety of learning situation and to assess the learning process in blind children.

Educational Achievement Tests: Several standard tests of achievement are available in large print or braille from the American Printing House for the Blind. Most of the standard achievement tests have been used with or without modifications with the blind and partially sighted.

Measures of Social Functioning: These assessment tools have largely been based on checklists of independent living skills and other skills related to personal and social functioning. The Vineland has been a traditionally used measure. The Overbrook Social Competency Scale has been developed with items particularly focussed on visually impaired persons, and relates to areas such as self-help, self-direction, communication, socialization, and motor skills. Norms are available for the visually impaired ages 6-adult. Available from Nevil Interagency Referral Service, 919 Walnut Street, 4th Floor, Philadelphia, Pennsylvania, 19107.

Other similar measures have been developed in recent years that may be adapted for use with the visually impaired. These include: (1) Street Survival Skills Questionnaire (SSSQ) - available from McCarron - use with partially sighted only; (2) Social and Pre-vocational Information Battery (SPIB), McGraw-Hill, 2500 Garden Road, Monterey, California, 93940; and (3) Camelot Behavior Skills Checklist.

Similar assessment checklists have been developed for use with deaf-blind: (1) An Assessment Guide for Deaf-Blind Persons, Midwest Regional Center for Services to Deaf-Blind Children, Lansing, Michigan, 48909. This checklist focusses on five major skill areas needed most often for entrance into sheltered workshops - basic work skills, communication skills, general mobility skills, behavior, work related skills, desirable and supplemental skills. This checklist is intended to be used in individual planning in skills needed to ready deaf-blind, low-functioning individuals into long-term sheltered employment. (2) Assessment of Pre-vocational and Daily Living Skills, Mountain Plains Regional Center for Services to Deaf-Blind Children, 165 Cook Street, Suite 304, Denver, Colorado, 80206. This scale is comprised of eight assessment areas: food preparation and management, care of their living environment, care of clothes, work skills, social/affective development, recreation, sexual behaviors, and health and safety.

Personality Tests: Personality tests designed for the sighted are perhaps the most susceptable to producing inaccurate results due to the different life experiences of visually impaired persons. However, modifications of both projective and standardized personality tests have been used with the visually impaired. Several measures have also been developed specifically for use with the blind including Bauman's Emotional Factor's Inventory (EFI), available from Nevil Interagency Referral Service, 919 Walnut Street, Philadelphia, Pennsylvania, 19107. See Scholl and Schnur (1976) and Vander Kolk for more information.

Vocational Interest and Aptitude Tests

Many of the interest inventories used with sighted persons have been used with the visually impaired. Bauman developed an interest inventory specifically for the blind that focusses on jobs that are realistic for blind persons. 150 items are placed in ten categories: mechanical, computational, scientific, persuasive, artistic, literary, musical, and social service. Norms are based on 580 visually impaired individuals. The Strong-Campbell, ACT Career Planning Survey, Kuder and others have been used.

Until recently (See work samples) few tests have been available to test vocational aptitudes of visually impaired persons that have gained significant recognition. Partially sighted individuals have used traditional aptitude measures such as the General Aptitude Test Battery (GATB), Minnesota Paper Form Board, etc. However, these tests have minimal use with totally blind persons.

The Psychological Battery for Use by Blind Adults has been developed to provide a vocationally oriented assessment of the blind. It has included semi-structured interviews, personality tests, the Vocational Intelligence Scale for the Adult Blind (VISAB) and the Tactual Reconstruction Pegboard. According to Vander Kolk, however, this battery has not had wide acceptance in the field.

Most vocational tests adapted for the blind have been performance tests that assess manual dexterity - the implicit assumption being that a most important vocational trait for blind persons is rapid use of hands. Tests most often used include: (1) Clawson Worksample Tests that were based on industrial assembly tasks; (2) Minnesota Rate of Manipulation which provide special administration instructions for use with the blind; (3) Pennsylvania Bi-manual Worksample which has norms for the blind; (4) Crawford Small Parts; and (5) the Purdue Pegboard Test for which Vander Kolk (1981) has published recent norms for the blind. Bauman has provided special administration instructions for the Crawford, Purdue, and MRM which primarily consist of special physical orientation and practice procedures: Mary Bauman, Tests Used in the Psychological Evaluation of Blind and Visually Handicapped Persons, 1968. Available from American Foundation for the Blind.

Work Samples

Work samples used with visually impaired persons include: (1) work samples developed by local rehabilitation facilities for the blind; (2) work sample systems commercially adapted for use with the blind; and (3) commercial systems adapted for local use with the blind. Primary literature available is: (1) Mary Dickson, Work Sample Evaluation of Blind Clients. MDC, SVRI, University of Wisconsin-Stout, Menomonie, Wisconsin, 54751; (2) Use of Work Samples with Blind Clients, (1975). Available from Nevil Interagency Referral Service, 919 Walnut Street, Room 400, Philadelphia, Pennsylvania, 19107.

Work samples developed by local rehabilitation facilities

Work samples for the blind appear most often to be based on jobs in sheltered workshops for the blind. In a recent national survey, those appearing most often are the criterion-referenced work tasks developed by Royal Maid Industries for the Blind in Hazlehurst, Mississippi. These include a variety of operations including sorting, assembly, woodworking, and disassembly tasks primarily related to skills needed to function effectively in an industrial setting - particularly workshops associated with the National Industries for the Blind.

The Rehabilitation Research and Training Center in Blindness and Low Vision (RRTC-BLV) and Mississippi State University (MSU) at Royal Maid in Hazlehurst are cooperatively standardizing administration instructions for several work samples. These should be available in the next year from: RRTC-BLV, Drawer LQ, Mississippi State, Mississippi, 39762.

These work samples are particularly useful in basic assessment and work adjustment training for the low functioning, multi-handicapped blind person. The work samples include a hinged box foot-operated hinged box, bi-manual placement, and index card task unit. Each of these is designed to measure various manual abilities and are coupled with a work pacing timer - this timer can be set to provide a response if a set work pace is not met. For instance, a client may be asked to complete an assembly and place it in the box. A radio plays until the individual goes over a pre-set time limit. For deaf-blind, the timer can control a vibrator, fan, etc. A work sample is also being developed to assess the effects of varied color combinations and light intensity on the work patterns of the partially sighted. Another for which plans are available is the revolving assembly table.

Many rehabilitation facilities report the use of work samples locally developed that are not in publishable form. The RRTC-BLV hopes to work with facilities in the coming years to improve and disseminate local vocational assessment efforts.

Work sample systems commercially adapted

Two work sample systems have presently made adaptations specifically for the blind. (1) The McCarron-Dial Work Evaluation System has provided a revised administration manual and norms for the Haptic and MAND as part of its system. Information is available from McCarron-Dial Systems, Box 45628, Dallas, Texas, 75245; (2) the VALPAR Company has developed a work sample specifically for the blind (CUBE #18) and has modified work samples 1, 2, 4, 8, 9, and 10 for use with the blind. These efforts appear to meet identified needs of the field for assessment of traits especially important for the visually impaired. Information available from VALPAR, 3801 East 34th Street, Tucson, Arizona, 85713.

Commercial systems locally adapted

Dicksen (1976) has provided a publication that describes general methods and procedures for modifying commercial work samples for use with the blind with specific procedures given for the Singer system (based on work done at the Wisconsin School for the Visually Handicapped), VALPAR, and JEVS. According to a recent national survey, these are the work sample systems most often used with the visually impaired.

Work samples for skilled, technical, and professional positions

A project is now underway at the Research and Training-BLV at Mississippi State University to adapt or develop/work samples for more skilled, technical and professional positions. Materials will be field-tested nationally in programs for the blind.

Informal assessment and situational assessment

Situational assessment involves the placement of an individual in a work setting and systematically observing work behaviors and abilities. Typical locations include: (1) communications, orientation and mobility classes and other instructional situations; (2) vocational training classes; (3) sheltered workshop jobs; and (4) competitive employment. Several excellent programs are available in the country that have strong vocational training programs. When these are available the visually impaired person will most often try-out several training situations. Several programs have available similar set-ups for community job tryouts. Checklists of work skills and behaviors are most used in these situations. Little modification is needed for the visually impaired individual in these checklists (See Peterson, 1981, for sources).

ADDITIONAL INFORMATION SOURCES

1. Peterson, Michael. Vocational Assessment: An Implementation Manual of Students with Special Needs, 1981. Available from Occupational Curriculum Laboratory, East Texas State University, Commerce, Texas, 75428.

2. Pruitt, Walt. Vocational (Work) Evaluation. Available from Walt Pruitt Associates, C/O SVRI, University of Wisconsin-Stout, Menomonie, Wisconsin, 54751.

3. Several publications in vocational evaluation are available from Materials Development Center, University of Wisconsin-Stout, Menomonie, Wisconsin, 54751.

1.23: VOCATIONAL EDUCATION PROGRAMS AND LOCAL JOBS: ENTRY-LEVEL CRITERIA

Giving vocational assessment tests without knowing the entrance criteria of programs will not allow a student's skills to be matched with the requirements of those programs. Each of the vocational training options in a school system should be analyzed to determine entrance criteria, success or mastery skills, and teaching techniques. For example, if one is assessing a mentally retarded student to determine if auto mechanics is an appropriate training program, one must know the skills that a student should possess to complete the course. Information about the required knowledge of tools, reading and math ability, and physical dexterity and aptitudes should be secured. Minimal skill levels are the primary concerns for every vocational education program. How the course is taught, what rate of learning is expected of the student and what curriculum modifications are possible are also necessary. After resolving these issues, one can then select or develop an appropriate assessment instrument. Without a thorough knowledge of entrance criteria, the evaluator will waste the time spent on vocational assessment. The truth is that much of this information is used constantly; however, in many school systems, the information is not stated explicitly. The more clearly entrance criteria can be stated, the better the assessment program and the vocational student selection process in general will be.

To gather entrance criteria for vocational programs, the following tasks should be completed:

1. Identify the local vocational programs available to handicapped students. Local vocational programs that may be available are the regular vocational programs and modified vocational programs such as Vocational Education for the Handicapped (VEH), Vocational Adjustment Coordinator (VAC) classroom, and Coordinated Vocational-Academic Education (CVAE). Rehabilitation facilities, sheltered workshops, and prevocational training programs may also be available.

2. Gather information from teachers of available programs. Questions should be asked about entrance criteria, success behaviors, teaching techniques, and potential curricula modifications. Initially, direct interaction with teachers will be helpful. If in-service training is conducted, teachers can complete a Training Analysis Form (see Appendix A for sample Training Analysis Form) and return it to the task force of vocational assessment specialist. As indicated on the Training Analysis Form, entrance criteria should be gathered in the areas listed below for each program—e.g., CVAE agriculture and CVAE general construction trades would require different entry-level skills of students.

Physical Skills	Vocational Skills	Educational Skills
walking	safety rules	reading
standing	use of basic tools	math
lifting	work behaviors	language
carrying		problem-solving
speech		
fine/gross motor dexterity		

3. Develop an entrance criteria/program matrix chart. Each entry-level skill for a given program will probably apply to a number of vocational programs. A chart can be developed that relates each entry-level characteristic to all applicable programs (see Appendix B). The chart promotes an understanding of program requirements and provides an aid in specifying assessment questions. In determining whether a student should enter a vocational program in auto mechanics, a chart will indicate exactly what needs to be asked about that student. Assessment information can be realted to vocational program requirements. If task analysis forms are kept with this chart, a vocational assessment specialist possesses a tool invaluable in making recommendations for entrance into vocational programs.

4. Compile the information into a booklet. Having entrance criteria information available will help in using Level I and II assessment information to determine if students possess minimal skills without having to use the expensive, comprehensive Level III assessment. However, entrance criteria, program descriptions, and potential curricula modifications should be reviewed and updated on a regular basis.

This process involves a great deal of work, but the information can be invaluable in ARD meetings, for example. A systematic procedure should be developed and implemented for gathering information. The resources listed below may be useful in identifying entry-level criteria of vocational education programs.

Project VESEP (Vocational Education/Special Education Project)

Career Education
College of Education
Michigan State University
East Lansing, Michigan 48824

This project identified "prevocational enabling skills" associated with training programs for handicapped persons in Michigan. A detailed skills/program matrix was developed. The vocational programs and requirements have not yet been compared with those in Texas, so some modifications in the system may be necessary. However, Project VESEP provides an excellent model and usable entrance criteria information.

Texas A&M Studies

Vocational Special Needs
College of Education
Texas A&M University
College Station, Texas 77843

Three studies were implemented by personnel at Texas A&M University to determine entrance criteria for the following vocational programs: vocational agriculture, homemaking, and auto mechanics.

Project VERT (Vocational Education Readiness Test)

Research and Curriculum Unit
Mississippi State University
P.O. Drawer DX
Mississippi State, Mississippi 39762

This project identified entry-level skills needed for vocational programs in Mississippi. Work samples to assess these skills were developed.

Many handicapped students will enter employment as part of their high school program or immediately following graduation from high school. Vocational assessment can be used to provide information concerning interests and skills in recommending optimum job placement. The goal, of course, is to help handicapped students find the best jobs possible. Information is needed concerning types of jobs available in the community and job skill requirements.

Information concerning jobs is available from a variety of sources. Vocational adjustment coordinators and vocational education teachers are familiar with local jobs, and local advisory committees for vocational education can provide valuable contacts and information. In addition, publications from the State Employment Commission provide information concerning local job openings. Information concerning the skill and task requirements is gained primarily through job analysis and the use of the *Dictionary of Occupational Titles* (DOT).

Job analysis involves gathering information about the tasks and skill requirements of jobs. Direct observations combined with interviews of employers, supervisors, or workers can be used. If job tryouts (Chapter 6) are used as part of Level III assessment, specific job analysis can aid in generalizing abilities from one job to another. Job analysis can also be used in developing work samples and suggesting job modifications (A sample Job Analysis Form is included as Appendix C.). Job analysis is most effective when those doing the analyzing have received training in the technique. Universities offering vocational teacher certification offer courses in vocational education curriculum development, and these courses usually offer training in job analysis. Training programs for vocational evaluators offer such training as well. The following publications can be useful in conducting a job analysis in the format provided by the *Dictionary of Occupational Titles*.

1. *Job Analysis Training Manual*
2. *Handbook for Analyzing Jobs* (Cost: $3.00)

Available from: Research and Training Center
University of Wisconsin-Stout (see Appendix D)

A training manual regarding the use of the DOT is also available. This self-instructional manual is designed to assist professionals in the effective use of the fourth edition of the DOT.

The Dictionary of Occupational Titles in Vocational Assessment
(Cost: $3.00)

Available from: Materials Development Center
University of Wisconsin-Stout (see Appendix D)

The Dictionary of Occupational Titles may be ordered from:
Superintendent of Documents
U.S. Department of Labor
U.S.Government Printing Office
Washington, D.C. 20402
(Cost: $12.00)

1.26: SELECTING VOCATIONAL ASSESSMENT METHODS AND PURCHASING MATERIALS

The selection of assessment methods and materials must be based upon the characteristics of the target population and the types of assessment questions to be answered. Assessment questions in turn are based on the entrance criteria of vocational and other programs, many developmentally based assessment questions, and the specific needs of the student. Vocational assessment methods must be selected that show the most promise for providing valid and cost-effective techniques for answering the assessment questions. Some methods of vocational assessment are identified in Table 5.

These methods must be evaluated in terms of cost and effectiveness. This is especially true in the vocational assessment of handicapped persons. Some types of tests, particularly paper and pencil aptitude tests, are relatively inexpensive but have proven invalid for handicapped students, while some vocational assessment instruments, especially commercial work sample systems, can be costly yet effective in predicting employability with the handicapped. Depending on the nature of the population, the type of commercial system and the desired information, these instruments may or may not provide valuable information. Factors to consider in evaluating the cost of vocational assessment instruments may be considered under three categories provided in Table 6.

Appendix A

TRAINING ANALYSIS FORM

Vocational Program: _____

Instructor: _____ School: _____

Date: _____

Occupational training goal(s) of program: _____

_____

_____

_____

I. ENTRANCE CRITERIA

A. *Physical skills:* Check the minimal (physical skills) that are required for entrance into your program, describe modifications which could be made to accommodate a physically handicapped student.

Skill	Description of Abilities	Modification
____ walking:	_____	_____
____ standing:	_____	_____
____ lifting:	_____	_____
____ carrying:	_____	_____
____ bending:	_____	_____
____ fine-motor:	_____	_____
____ speech:	_____	_____
____ other:	_____	_____
____ other:	_____	_____

B. *Educational skills:* Describe the minimal academic skills that are required for entrance into your program and the modifications which could be made in teaching to accommodate for students with lower skill levels?

math:	_____	_____
reading:	_____	_____
language:	_____	_____

C. *Vocational skills:* Describe the basic knowledge and use of tools that are required for entrance into your program. _____

_____

_____

Describe the safety rules that must be followed for entrance into your program _____

_____

_____

TRAINING ANALYSIS FORM, cont'd.

Describe the most critical work behaviors that must be followed for entrance into your program. _____

_____

_____

_____

Other concerns? _____

_____

_____

_____

II. TEACHING TECHNIQUES. Check the teaching techniques which you use in your program and list how they could be modified for the needs of a handicapped student.

Technique	Modification
____ lecture:	_____
____ audiovisual:	_____
____ small gp. project:	_____
____ discussion:	_____
____ demonstration:	_____
____ study text:	_____
____ grade level:	_____
____ ind. projects:	_____
____ other:	_____

Most all students in your program proceed at the same pace?

____ Yes ____ No Suggested modifications? _____

_____

III. What support services or materials would you need to help handicapped students succeed in your program? _____

_____

_____

_____

Other comments? _____

_____

_____

Person doing analysis: _____

Appendix B

ENTRY-LEVEL CRITERIA/PROGRAM MATRIX

Entry-Level Characteristics	Program											
	1	2	3	4	5	6	7	8	9	10	11	12
(EXAMPLE)												
READING LEVEL: 8th grade	X	X					X					
5th grade			X	X	X							
3rd grade					M	X	M					
None						M						

X=Skill is absolutely required prior to entrance into vocational program.

M=Skill level is acceptable with curriculum modifications or with support from special education.

Appendix F

INDIVIDUAL VOCATIONAL EVALUATION PLAN

STUDENT:_____ DATE:_____ EVALUATOR:_____

*	Questions	*	Methods	Date	Persons Involved	Plan Modification	Results